

# **Flood Map Modernization State Business Plan Commonwealth of Kentucky**

## **FY 2006 Update**

### **I. Purpose**

The Kentucky Division of Water (KDOW), through a Cooperating Technical Partnership (CTP) agreement with FEMA, has developed a Business Plan for implementing FEMA's Flood Map Modernization Program. This Plan provides a comprehensive approach for the development of Digital Flood Insurance Rate Maps (DFIRMs) for all of Kentucky's counties as well as building the State's capacity to assume full responsibility for program oversight and administration. This annual update serves as a clarification to the original Business Plan submitted in March 2004 and the revisions to the original Business Plan submitted in February 2005. Items contained in this document will supersede the original Business Plan and the 2005 revisions where stated.

### **II. Business Plan Revisions**

In light of Procedure Memoranda 34, 35, 36, 37, and 38 issued by FEMA Headquarters, the Kentucky Flood Map Modernization Business Plan for the Commonwealth of Kentucky amends its existing Business Plan to include the provisions included in those memoranda. All Mapping Activity Statements will be completed using the revised standards outlined in FEMA Procedure Memoranda 34, 35, 36, 37, and 38.

In particular, KDOW will implement the following standards and recommendations:

Per Procedure Memorandum 34:

- a. KDOW will provide information about levees located in or adjacent to study areas and provided to FEMA via the FEMA Levee Information System (FLIS).
- b. When levees are identified at the scoping meeting the community will be informed of the data requirements for FEMA to recognize a levee as providing protection from the 1% annual chance flood on the FIRM.

Per Procedure Memorandum 35:

- a. Compliance with Floodplain Boundary Data Quality Standards.  
All studies within the Commonwealth of Kentucky will comply with the data quality standards outlined in Section 7 of the Multi-Year Flood Hazard Identification Plan (MHIP) for Fiscal Year 2004-2008. The level of study in each county will be determined upon scoping and reported to the Regional Project Officer in Mapping Activity Statements and Final Scoping Reports. It is anticipated that the remaining counties in Kentucky will fall under Risk Class B and C.
- b. Use of the Scoping Tool in the Multihazard Information Platform (MIP). The Scoping Tool in the MIP will be used for FY 2006-2008 scoping activities. This will facilitate any pre-scoping activities performed by the NSP and allow for easier incorporation into the final Scoping Reports.

- c. Compliance with Data Capture Standards. Appendix N of *Guidelines and Specifications for Flood Hazard Mapping Partners* will be used in generating engineering and mapping data during flood hazard studies. If available, the MIP utilities will be used to ensure data submission compliance with the Data Capture Standards (DCS).
- d. Entering Project Data into the MIP. All project data will be stored in the MIP, if available. This includes all management data and technical engineering and mapping data.
- e. Coordination with Regional Management Centers. Coordination concerning mapping activities will include the RMC IV to the fullest extent possible.
- f. Developing Quality Control (QC) Plans. A QC plan will be developed by KDOW and delivered to FEMA according to the MAS cooperative agreement. This plan will outline the steps taken by KDOW to review and comment on study data and will include the spreadsheet checklists used for these purposes.

Per Procedure Memorandum 36:

A profile baseline on all DFIRMs developed that supercedes the standards outlined in *Guidelines and Specifications for Flood Hazard Mapping Partners* (April 2003). This profile baseline will match the streamline/profile baseline used in effective or any new study areas.

Per Procedure Memorandum 37:

*Protocol for Atlantic and Gulf Coast Coastal Flood Insurance Studies in FY05*. Not applicable to Kentucky as there are no Atlantic or Gulf Coast Coastal Flood Insurance Studies in the Commonwealth.

Per Procedure Memorandum 38:

- All updated procedures for adhering to the MHIP Section 7 will be applied including:
- a. Determining the risk class upfront. This decision will be made by state and local officials during the project scoping phase.
  - b. Determining the adequacy of level of study.
  - c. Determining the adequacy and reliability of existing flood hazard data.
  - d. Determining the appropriate method for mapping non-revised floodplains.

### III. Significant Issues

Funding is needed beyond FY2008 to revisit communities with unmet mapping needs. For example, 7 counties along the Ohio River in NE KY have maps that are NGVD 29, all other maps are NAVD 88. Louisville Metro, Warren County-Bowling Green, and Lexington-Fayette Urban County Government (LFUCG) have approached KDOW for additional funding for unmet needs. In addition, during the Scoping phase of FY 2005 counties, many communities have identified areas beyond the current Scopes of Work as needing more detailed flood hazard information. These needs will be documented in the MIP for future studies.

KDOW has regulatory authority over all mapped and unmapped streams in KY; state stream construction permits are generally issued for all development up to the 1 square mile (1 mi<sup>2</sup>) watershed area. In unmapped areas, this has the potential to put considerable financial strain on citizens desiring a state stream construction permit, since technical data must be provided by the permittee to KDOW in order to process and review the permit application. Due to this need,

it is KDOW's goal to map all floodplain areas up to the 1 square mile watershed area, dependent upon funding. With over 89,000 miles of rivers and streams in the Commonwealth, there is considerable need for funding beyond FY 2008. After the Map Modernization effort funding cycle is complete in FY 2008, less than 50% of the flood-prone areas in the state will be identified.

KDOW prepared the original Business Plan with an assumed level of funding per year based upon discussions with FEMA. The Plan also included a production sequence that was optimized to exceed FEMA's performance metrics. Since that time, the level of funding and the production sequence have been changed. The following table indicates the revised funding and sequencing schedule and its correlation with KPI #1.

Fiscal Year	Business Plan Funding	Business Plan Counties Completed	Business Plan Population Metric	Revised MHIP Funding	Revised Counties Completed	Revised Population Metric
FY2004 or prior	\$ 2,796,800	9	8%	\$ 2,504,000	9	8%
FY2005	\$ 2,806,200	20	57%	\$ 2,570,000	15	48%*
FY2006	\$ 2,805,000	20	67%	\$ 3,492,000	13	60%*
FY2007	\$ 2,796,000	18	76%	\$ 3,679,000	25	73%*
FY2008	\$ 2,796,000	20	87%	\$ 3,829,000	27	89%
FY2009	\$ --	33	100%	\$ --	31	100%
<b>TOTAL</b>	<b>\$14,000,000</b>	<b>120</b>	<b>100%</b>	<b>\$16,074,000</b>	<b>120</b>	<b>100%</b>

\* Revision does not meet national Key Performance Indicator

By altering the county sequence from the original business plan and the FY 2005 updates, flood insurance statistics were also altered. The following table depicts insurance policy statistics compared with proposed preliminary DFIRM production (% insurance policy base is based upon the actual number of policies as of September 7, 2005).

Year Preliminary DFIRM Published	% Insurance Policy Base	Cumulative % Insurance Policy Base
FY 2004	12.0%	12.0%
FY 2005	49.0%	61.0%
FY 2006	14.1%	75.1%
FY 2007	13.7%	88.8%
FY 2008	6.0%	94.8%
FY 2009	5.2%	100%

As Map Modernization progresses throughout the state, there is the potential for many communities with no SFHAs to have newly identified SFHAs either through annexation or better study methodologies. The table below outlines the total number of communities and the

number of non-participating NFIP communities that will be receiving new DFIRMs from FY 2005-FY 2008.

Year County Funded	Total Number of Communities (including counties and incorporated areas)	Total number of non-participating NFIP communities
FY 2005	70	23
FY 2006	77	17
FY 2007	98	30
FY 2008	106	41

Considering the number of non-participating communities that will be receiving new DFIRMs, considerable outreach will have to be conducted by KDOW, FEMA, and/or the NSP in order to avoid a potentially significant amount of sanctioned communities.

## **IV. Conclusions**

### **Funding**

FEMA has increased the Map Modernization funding allocations for FY 2006-2008 from \$8.723 million to \$11 million. This funding increase will allow for the remaining unmapped counties in Kentucky to receive quality digital maps.

### **Map Maintenance**

In keeping with KDOW's goal of mapping flood hazard areas up to the one square mile (1 mi<sup>2</sup>) watershed area, there is a significant gap with the available funding to achieve this goal. KDOW plans to identify flood hazard areas up to the smallest watershed possible with existing funding. With this in mind, it is vital to the usability of the new map products that map maintenance issues are addressed. As more accurate data is produced, which is inevitable, there must be a plan after 2008 to maintain the maps and supplement them with additional flood hazard data. It would be a discredit to the efforts put forth to have digital map products and not strive to identify as many flood hazards as possible.

In addition to increased funding, the release of funding to CTP sooner in the fiscal year is encouraged so that production schedules can be met. KDOW realizes that the Region does not have complete control over the timing of when the funds can be released to Kentucky. Similarly, the Region cannot expect KDOW to meet production schedules when funding is delayed until mid-year. When this happens, KDOW and FEMA lose valuable production and map adoption time, thereby delaying the project and metric completion.

### **Study Management**

KDOW has finalized their Map Modernization procurement process and now has sufficient contractor capacity to assist the State in implementing this program. KDOW will be responsible for conducting future project scoping, production and map adoption tasks in accordance with the

State's business plan and all subsequent revisions. With proper funding, KDOW can manage and coordinate the remainder of Map Modernization such that expectations are achieved for quality, timeliness and enhancement of floodplain management participation and awareness throughout the State.

**Flood Map Modernization  
State Business Plan  
Commonwealth of Kentucky**

**Production Sequence 2006 Update**

County	Estimated Funding	Year Funded	Preliminary DFIRM Completion
Boyd	\$ 0*	FY 03 or prior	FY 04 or prior
Bracken	\$ 0*	FY 03 or prior	FY 04 or prior
Bullitt	\$ 0*	FY 03 or prior	FY 04 or prior
Campbell	\$ 0*	FY 03 or prior	FY 04 or prior
Greenup	\$ 0*	FY 03 or prior	FY 04 or prior
Lewis	\$ 0*	FY 03 or prior	FY 04 or prior
Magoffin	\$ 0*	FY 03 or prior	FY 04 or prior
Mason	\$ 0*	FY 03 or prior	FY 04 or prior
Pendleton	\$ 0*	FY 03 or prior	FY 04 or prior
Fayette	\$ 0*	FY 03	FY 05
Jefferson	\$ 0*	FY 03	FY 05
Bell	\$ 180,000	FY 04	FY 05
Boone	\$ 180,000	FY 04	FY 05
Carroll	\$ 150,000	FY 04	FY 05
Franklin	\$ 180,000	FY 04	FY 05
Hardin	\$ 180,000	FY 04	FY 05
Harlan	\$ 180,000	FY 04	FY 05
Knox	\$ 180,000	FY 04	FY 05
Laurel	\$ 180,000	FY 04	FY 05
Oldham	\$ 180,000	FY 04	FY 05
Perry	\$ 180,000	FY 04	FY 05
Pike	\$ 180,000	FY 04	FY 05
Warren	\$ 366,000	FY 04	FY 05
Whitley	\$ 180,000	FY 04	FY 05
Breathitt	\$ 168,000	FY 05	FY 06
Breckinridge	\$ 102,000	FY 05	FY 06
Christian	\$ 421,000	FY 05	FY 06
Clay	\$ 160,500	FY 05	FY 06
Daviess	\$ 431,000	FY 05	FY 06
Gallatin	\$ 99,500	FY 05	FY 06
Hancock	\$ 102,000	FY 05	FY 06
Hopkins	\$ 229,000	FY 05	FY 06
Kenton	\$ 347,000	FY 05	FY 06
Knott	\$ 111,000	FY 05	FY 06
Leslie	\$ 132,500	FY 05	FY 06
Letcher	\$ 139,500	FY 05	FY 06
Trimble	\$ 127,000	FY 05	FY 06
Anderson	\$ 125,000	FY 06	FY 07
Boyle	\$ 150,000	FY 06	FY 07
Casey	\$ 132,000	FY 06	FY 07
Crittenden	\$ 100,000	FY 06	FY 07
Floyd	\$ 200,000	FY 06	FY 07
Henderson	\$ 225,000	FY 06	FY 07

County	Estimated Funding	Year Funded	Preliminary DFIRM Completion
Jackson	\$ 100,000	FY 06	FY 07
Johnson	\$ 200,000	FY 06	FY 07
Larue	\$ 100,000	FY 06	FY 07
Lawrence	\$ 150,000	FY 06	FY 07
Lee	\$ 100,000	FY 06	FY 07
Lincoln	\$ 150,000	FY 06	FY 07
Martin	\$ 150,000	FY 06	FY 07
McCreary	\$ 108,000	FY 06	FY 07
Meade	\$ 125,000	FY 06	FY 07
Mercer	\$ 144,000	FY 06	FY 07
Morgan	\$ 132,000	FY 06	FY 07
Owsley	\$ 100,000	FY 06	FY 07
Pulaski	\$ 225,000	FY 06	FY 07
Rockcastle	\$ 125,000	FY 06	FY 07
Shelby	\$ 150,000	FY 06	FY 07
Spencer	\$ 125,000	FY 06	FY 07
Union	\$ 144,000	FY 06	FY 07
Wayne	\$ 132,000	FY 06	FY 07
Wolfe	\$ 100,000	FY 06	FY 07
Ballard	\$ 100,000	FY 07	FY 08
Caldwell	\$ 162,000	FY 07	FY 08
Calloway	\$ 144,000	FY 07	FY 08
Carlisle	\$ 100,000	FY 07	FY 08
Clark	\$ 125,000	FY 07	FY 08
Estill	\$ 100,000	FY 07	FY 08
Fulton	\$ 114,000	FY 07	FY 08
Garrard	\$ 100,000	FY 07	FY 08
Graves	\$ 175,000	FY 07	FY 08
Hickman	\$ 100,000	FY 07	FY 08
Jessamine	\$ 150,000	FY 07	FY 08
Livingston	\$ 115,000	FY 07	FY 08
Logan	\$ 174,000	FY 07	FY 08
Lyon	\$ 100,000	FY 07	FY 08
Madison	\$ 204,000	FY 07	FY 08
Marion	\$ 126,000	FY 07	FY 08
Marshall	\$ 215,000	FY 07	FY 08
McCracken	\$ 200,000	FY 07	FY 08
Menifee	\$ 100,000	FY 07	FY 08
Montgomery	\$ 150,000	FY 07	FY 08
Nelson	\$ 177,000	FY 07	FY 08
Powell	\$ 102,000	FY 07	FY 08
Scott	\$ 150,000	FY 07	FY 08
Simpson	\$ 114,000	FY 07	FY 08
Todd	\$ 132,000	FY 07	FY 08
Washington	\$ 100,000	FY 07	FY 08
Woodford	\$ 150,000	FY 07	FY 08
Adair	\$ 100,000	FY 08	FY 09
Allen	\$ 114,000	FY 08	FY 09
Barren	\$ 186,000	FY 08	FY 09
Bath	\$ 130,000	FY 08	FY 09


County	Estimated Funding	Year Funded	Preliminary DFIRM Completion
Bourbon	\$ 150,000	FY 08	FY 09
Butler	\$ 100,000	FY 08	FY 09
Carter	\$ 175,000	FY 08	FY 09
Clinton	\$ 100,000	FY 08	FY 09
Cumberland	\$ 102,000	FY 08	FY 09
Edmonson	\$ 100,000	FY 08	FY 09
Elliott	\$ 100,000	FY 08	FY 09
Fleming	\$ 102,000	FY 08	FY 09
Grant	\$ 145,000	FY 08	FY 09
Grayson	\$ 180,000	FY 08	FY 09
Green	\$ 102,000	FY 08	FY 09
Harrison	\$ 117,000	FY 08	FY 09
Hart	\$ 126,000	FY 08	FY 09
Henry	\$ 100,000	FY 08	FY 09
McLean	\$ 100,000	FY 08	FY 09
Metcalfe	\$ 100,000	FY 08	FY 09
Monroe	\$ 100,000	FY 08	FY 09
Muhlenburg	\$ 200,000	FY 08	FY 09
Nicholas	\$ 100,000	FY 08	FY 09
Ohio	\$ 174,000	FY 08	FY 09
Owen	\$ 125,000	FY 08	FY 09
Robertson	\$ 100,000	FY 08	FY 09
Rowan	\$ 125,000	FY 08	FY 09
Russell	\$ 100,000	FY 08	FY 09
Taylor	\$ 100,000	FY 08	FY 09
Trigg	\$ 120,000	FY 08	FY 09
Webster	\$ 156,000	FY 08	FY 09

\* Funding provided prior to FY 2004.









# Kentucky Map Modernization Production Schedule -Revised 2006-

## Legend

 Major Watershed

## YEAR FUNDED

-  FY 2003
-  FY 2004
-  FY 2005
-  FY 2006
-  FY 2007
-  FY 2008

